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(54) CHEMICAL CONVERSION TREATMENT AGENT FOR IRON AND/OR ZINC

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a chemical conversion treatment agent for iron and/or zinc which can be applied to the iron such as a cold rolled steel sheet and a galvanized steel sheet and the zinc, and can reduce the amount of sludge and the amounts of phosphorous, nitrogen and heavy metals which give environmental.

SOLUTION: The chemical conversion treatment agent for the iron and/or zinc contains zirconium iron and/or titanium ions, and fluorine ions. The contents of the titanium ions are, by weight, 20 to 500 ppm, and the molar ratio of the contents of the fluorine ions are ≥ 6 times of the zirconium ions and/or the titanium ions. The treatment agent does not contain phosphoric ions, and whose pH is 2 to 5.